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Illinois Environmental Protection Agency 2200 Churchill Road, Springfield, IL 62706

MEMORANDUM

RECEIVED
REGION 1 D.W.P.C.

DATE: October 15, 1983

OCT 16 1983

TO: IDPDES Permit File

ENVIRONMENTAL PROTECTION AGENCY
STATE OF ILLINOIS

FROM: Timothy P. Kluge TRK

SUBJECT: Mobil Chemical Co. - Sediment Sampling (DePue, Bureau County)

As a part of the IDPDES Permit review process, a sample of the precipitate material downstream of Mobil's sample point 602 was collected and analyzed (results attached). In an attempt to determine whether this material has an adverse effect on human health or aquatic life, the results were compared to sediment sampling data from other Illinois streams (Illinois Water Quality Inventory Report - data attached). The parameters in the Mobil sediment compare to stream sediment as follows (mg/kg):

Parameter	Mobil	Mean	Max.
Total Phosphorus	151,500	1085	97,000
Cadmium	3.5	<2.95	1.1
Copper	5.0	17.0	850
Iron	4800	16,801	150,400
Lead	<7.5	127	18,900
Manganese	3150	577	3000
Zinc	85	203	5500

This data indicates that phosphorus and manganese are the only parameters significantly higher than the mean concentration. Neither of these constituents have been at levels of concern in the stream or in the well samples collected from the Zawacki or neighboring homes.

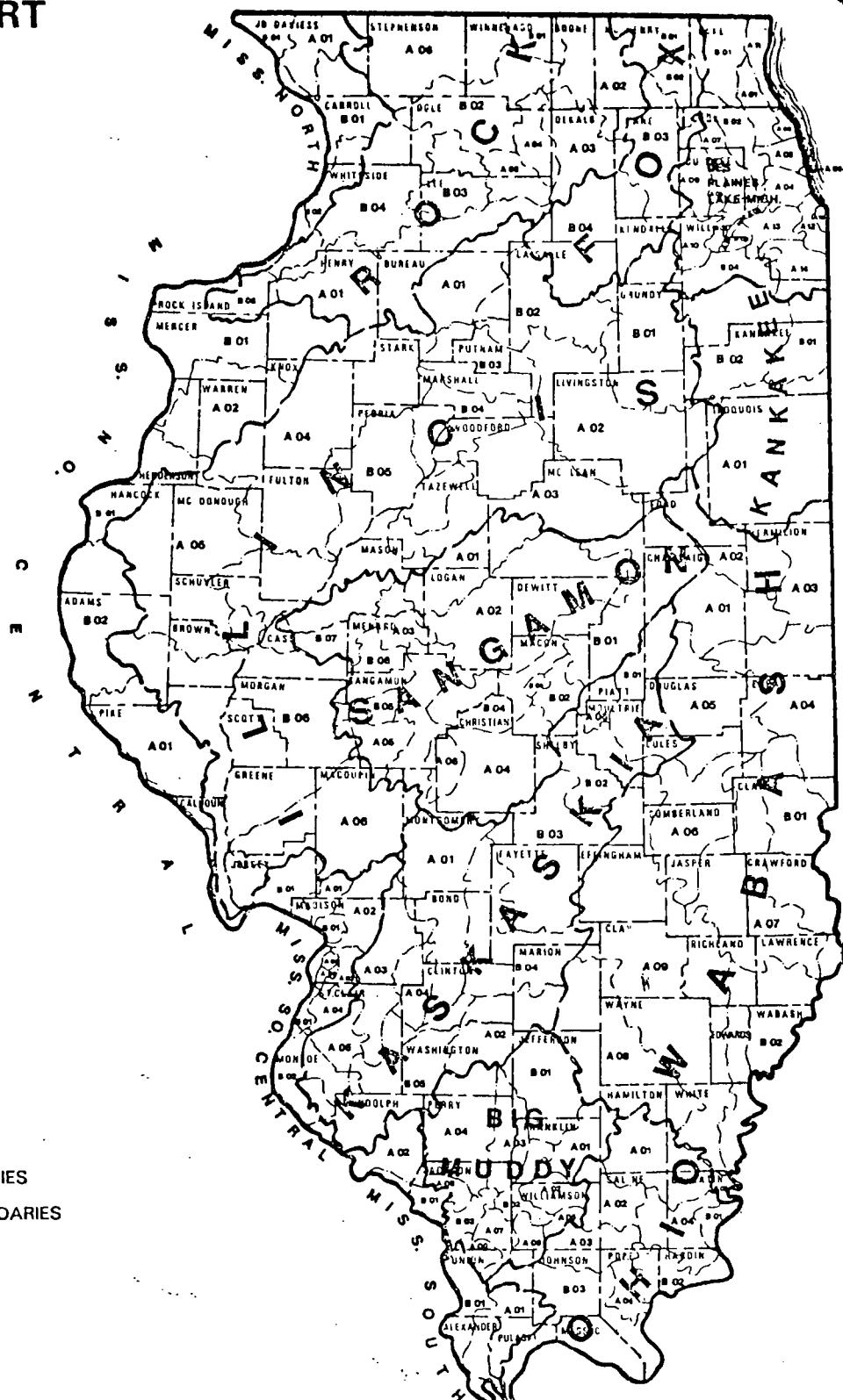
Based on this information, no further permit controls are indicated in addition to those included in the draft permit.

TRK:jd/343380/32

cc: RU/DWPC
 Region 1, Rockford
 John Williams, Enforcement Programs



**ILLINOIS
WATER QUALITY
INVENTORY REPORT
1980-1981**



BASIN BOUNDARIES
SEGMENT BOUNDARIES

Prepared By

**ILLINOIS
ENVIRONMENTAL
PROTECTION
AGENCY**

Division of Water Pollution Control
2200 Churchill Road
Springfield, Illinois 62706

TABLE 7. Mean sediment constituent concentrations in all sediment samples analyzed (A11) compared with mean concentrations for all sediment samples except those taken in the Des Plaines River Basin (-DP).

Parameter	Data Set Analyzed	# Samples Analyzed	Mean (S.D.)	Maximum	Minimum
COD (mg/kg)	A11 -DP	572 449	71539 (84480) 52483 (41193)	1130000 363000	
Total Kjeldahl Nitrogen (ng/kg)	A11 -DP	563 437	1913 (2055) 1604 (1977)	29144 29144	118 118
Total Phosphorus (mg/kg)	A11 -DP	609 483	1085 (4070) 680 (814)	97000 11800	100 100
Arsenic (mg/kg)	A11 -DP	163 123	5.87 (5.00) 4.79 (2.81)	49 17	1 1
Cadmium (mg/kg)	A11 -DP	827 631	<2.95 <1.79	154 154	<0.5 <0.5
Chromium (mg/kg)	A11 -DP	619 493	35 (69.5) 20 (27.0)	770 425	0.12 0.12
Copper (mg/kg)	A11 -DP	617 491	47.9 (93.9) 32.8 (76.1)	850 850	0 0
Iron (mg/kg)	A11 -DP	620 494	16801 (10650) 15122 (9639)	150400 150400	280 815
Lead (ng/kg)	A11 -DP	623 498	127 (812) 40.2 (72.5)	18900 860	0 0
Manganese (mg/kg)	A11 -DP	221 179	677 (364) 679 (394)	3000 3000	150 150
Mercury (mg/kg)	A11 -DP	625 510	0.27 (1.55) 0.105 (0.169)	30.00 2.00	0.002 0.002
Zinc (mg/kg)	A11 -DP	623 498	203 (439) 120 (287)	5600 5600	4.8 4.8